

REMARKS

In the subject Office Action, claims 1-21 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1, 5-8, 12-14, and 17 were rejected under 35 U.S.C. 102(b) as being anticipated by German patent 2,358,225 to Metzeler. Claims 1-7, 14-21 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 1,835,575 to Sanders et al. Claims 8-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders et al. (1,835,575). Claims 8-13 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 1,750,346 to Chilton. Claims 1-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chilton (1,750,346). Claims 14-21 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 1,940,302 to Humphrey et al.

With this Reply, applicants have replaced paragraph 3 to correct a typographical error. The word "inter" at line 9, paragraph 3 has been changed to "inner". Applicants submit that no new matter has been added with this change and that this change provides conformity with the other uses of the term, such as in paragraph 42, line 5.

In the subject Office Action claims 1-21 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It was stated that the phrase "sleeveless" of claims 1, 8, 14, and 18 is vague and ambiguous.

Applicants respectfully traverse this rejection.

Applicants respectfully submit that the term sleeveless bushing has been adequately defined in the specification. Applicants have disclosed in paragraph 3, lines 6-10 that traditional leaf spring bushings include an elastomeric core that is confined by an outer metal sleeve and that such traditional bushings usually have three layers, including an inner metal sleeve or pin, the elastomeric core and the outer metal sleeve. The outer sleeve classifies this traditional bushing as a "sleeved" bushing.

Applicants then proceed to define sleeveless bushings by stating in paragraph 5, lines 3-6, that sleeveless bushings eliminate the outer metal sleeve. In other words, a sleeveless bushing does not include the outer metal sleeve component of traditional bushings. Additionally, a sleeveless bushing is again described in paragraph 42, lines 3-6 and shown in Fig. 3 as a bushing without an outer metal sleeve component. The specification is replete with similar descriptions of sleeveless bushings.

It was also stated in the subject Office Action that claims 4, 11, 16, and 20 produce a contradiction because these claims recite that the "sleeveless bushing" includes a "sleeve." Applicants submit however that no such contradiction exists when the above remarks are considered. As previously discussed, the specification clearly explains that a sleeveless bushing refers to a bushing that does not include an outer metal sleeve portion. The claims however recite that the sleeveless bushing further comprises a metal sleeve surrounded by an elastomeric

core. There is no contradiction since the metal sleeve recited in the claims is not an outer metal sleeve component of a bushing.

Further, it was stated that elements 60, 40, etc. of Figs. 4 and 7 are sleeves as broadly interpreted and that "sleeveless" is a meaningless term in the claims in defining over the prior art. Applicants respectfully submit that sleeveless as referring to sleeveless bushings provides desirable advantages and is important in defining the invention and distinguishing it over the prior art. While it may be true that, when read in a vacuum and not in the context of the instant application, elements 60, 40, etc. of Figs. 4 and 7 are sleeves, they are nonetheless not components of bushings. In other words, the term sleeveless is referring to a component of a bushing or a type of bushing and not to other suspension system components, such as a leaf spring eye. These elements are irrelevant in determining whether a bushing is a sleeveless bushing or a traditional sleeved bushing.

Even if these elements are considered sleeves, the critical question is whether a sleeveless bushing or a traditional sleeved bushing is inserted into them. If a sleeved bushing is placed within these so-called sleeves, metal-to-metal contact occurs as opposed to elastomer-to-metal contact when a sleeveless bushing is inserted. As stated in paragraph 4, lines 8-11, bushings having an outer metal sleeve typically do not fit as well and "rock" within a leaf spring eye. Furthermore, sleeveless bushings when placed within these so-called sleeves

provide a more consistent fit and are generally lighter as stated in paragraph 5, lines 6-13. These are just a few of the advantages of using sleeveless bushings.

To further clarify and distinguish over the prior art, applicants have amended independent claims 1, 8, 14 and 18 of the instant application with this reply. These claims have been amended to recite that the bushing receiving bore of the suspension component is separate and distinct from the bushing.

It is respectfully submitted that support for this language can be found in the drawings and the written description. It is believed that Fig. 4 shows a sleeveless bushing being installed within a leaf spring. A leaf spring eye, for example, includes a bushing receiving bore that is separate and distinct from the bushing. In addition, throughout the written description and drawings, whenever a bushing is installed in a bushing receiving bore, that bore is either a leaf spring eye or a shackle bore as possible examples and it is clear that these elements are separate and distinct from the bushing. Applicants submit that none of the prior art references of record disclose or teach such features.

Claims 1, 5-8, 12-14 and 17 were rejected under 35 U.S.C. 102(b) as being anticipated by Metzeler. Applicants submit that Metzeler does not disclose a suspension component connection assembly as defined by newly amended independent claims 1, 8 and 14. These independent claims now recite, among other things, a suspension component connection assembly comprising a suspension component having a bushing receiving bore separate and distinct

from a bushing including a groove, ribbed, or slot portion and a sleeveless bushing having an elastomeric portion having a ribbed, grooved, or protrusion portion adapted to fit within said groove, ribbed, or slot portion of said suspension component.

The bushing of Metzeler, as shown in Fig. 3, illustrates that element 23, which is characterized in the subject Office Action as a bushing receiving bore, is part of the bushing. For at least this reason, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 1, 8 and 14.

Claims 5-7, 12, 13, and 17 depend on these newly amended independent claims. Thus claims 5-7, 12, 13, and 17 recite features not shown or taught by the prior art, as discussed above in regards to claims 1, 8, and 14. In addition, these claims define features not shown in the prior art, are patentably distinct from the prior art and should be allowable. Consequently, Applicants respectfully request reconsideration and withdrawal of this rejection of claims claims 5-7, 12, 13, and 17.

Claims 1-7, and 14-21 were also rejected under 35 U.S.C. 102(b) as being anticipated by Sanders et al. It was stated that the bushing 7 of Sanders et al. has ribs or protrusions associated with notches, grooves, slots or openings 10 as shown in Fig. 3. Even assuming that Sanders et al. discloses the bushing defined by claims 1, 14 and 18, which it does not, there are additional structures defined in these claims. Newly

amended independent claims 1, 14 and 18 recite, among other things, a bushing receiving bore that is separate and distinct from a bushing, and a sleeveless bushing. The Office Action fails to show that Sanders et al. discloses a bushing receiving bore having the features set forth in the claims.

In addition, element 7 of Sanders et al., which has been characterized as a bushing, is actually the rubber member of a bushing. In lines 9-12, Sanders et al. discloses that a bushing unit is assembled with a rubber sleeve interposed between inner and outer members. Furthermore, Sanders et al. discloses in lines 82-87 that a rubber bushing unit, which consists of an inner member 5 an outer member or sleeve 6 and an intermediate body of rubber 7, is used in lieu of a metal bushing. In effect, this disclosure describes a sleeved bushing, not a sleeveless bushing. Moreover, as disclosed on page 2, lines 31-38 of Sanders et al., unlike the ribbed portion or protrusions of the sleeveless bushing as defined by claims 1, 14, and 18, the ribs or protrusions of the bushing of Sanders et al. are formed by the outer sleeve when it is subjected to pressure thereby distorting the rubber body to take this ribbed shape. Therefore, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 1, 14 and 18.

Claims 2-7, 15-17 and 19-21 recite features not shown or taught by the prior art, as discussed above in regards to claims 1, 14 and 18. In addition, these claims define features not disclosed or taught by the prior art, are patentably distinct from the prior art and should be allowable. Consequently,

Applicants respectfully request reconsideration and withdrawal of this rejection of claims 2-7, 15-17 and 19-21.

Claims 8-13 were rejected under 35 U.S.C 103(a) as being unpatentable over Sanders et al. It was stated that it would have been obvious to one having skill in the art to modify the Sanders et al. device to reverse the location of the ribs and grooves since a mere reversal of the essential working parts of a device involves only routine skill. However, Applicants respectfully submit that before the ribs and grooves can be reversed the reference must, at minimum, teach or suggest, among other things, a bushing receiving bore separate and distinct from a bushing, and a sleeveless bushing. Just as Sanders et al. does not disclose a bushing receiving bore not part of a bushing and a sleeveless bushing as defined by claims 8-13, they do not teach or suggest such features. Indeed, Sanders et al. teach away from such features when they disclose sleeved bushings. Since Sanders et al. teach away from sleeveless bushings and bushing receiving bores separate and distinct from a bushing, it is simply not possible let alone obvious to reverse the location of the ribs and grooves. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 8-13.

Claims 8-13 were also rejected under 35 U.S.C. 102(b) as being anticipated by Chilton. It was stated that flange 16 of element 15 cooperates with bushings 20. Applicants submit, however, that the bushings 20 of Chilton do not include a grooved portion as defined by claims 8-13. Nowhere in the

disclosure of Chilton is a grooved portion of a bushing identified. Indeed, in lines 57-61, Chilton discloses that the elastic rubber bushing 20 is of such diameter that it can be forced into tube 15 past the internal flange 16. Claims 8-13 recite among other things that the ribbed portion of the bushing receiving bore is adapted to fit within the groove portion of the bushing. The bushing includes a grooved or ribbed portion prior to installation in the suspension component. Applicants submit that Chilton does not disclose such a rib and groove fit. Therefore, for at least these reasons, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 8-13.

In addition, claims 1-7 were rejected under 35 U.S.C 103(a) as being unpatentable over Chilton. It was stated that it would have been obvious to one having skill in the art to modify the Chilton device to reverse the location of the ribs, protrusions relative to the grooves since a mere reversal of the essential working parts of a device involves only routine skill. However, Applicants respectfully submit that before the ribs, protrusions can be reversed relative to the grooves the reference must first teach or suggest among other things a bushing having a grooved portion as defined by claims 8-13 of the present invention. Chilton does not suggest or motivate a bushing receiving bore having a grooved portion so that the ribbed portion of a bushing would fit within the grooved portion as defined by claims 8-13. Therefore, reversal of elements that do not even exist would not

have been obvious. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 8-13.

Claims 14-21 were rejected under 35 U.S.C. 102(b) as being anticipated by Humphrey et al. It was indicated that apertures 11 and 11' cooperate with lugs 14 of cylinder 12 and that apertures 11 and 11' could also be slots. Applicants respectfully submit that Humphrey et al. do not disclose the suspension component connection assembly defined by newly independent claims 14 and 18. These claims recite among other things that the suspension component connection assembly comprises a suspension component having a bushing receiving bore separate and distinct from a bushing including a slot or hole and a sleeveless bushing having an elastomeric portion having a protrusion, said protrusion adapted to fit within said slot or hole of bushing receiving bore.

As shown most clearly in Fig. 2, and as disclosed in lines 61-64 of Humphrey et al., the inner sleeve 2 is provided with the apertures 11, 11'. Inner sleeve 2 is not a bushing receiving bore. In fact the cylinder 12 does not fit inside inner sleeve 2, it surrounds the exterior of inner sleeve 2. In addition, as disclosed in lines 54-57 and 65-68 of Humphrey et al., inner sleeve 2 and outer sleeve 1 are part of a bushing. In other words, this disclosure is describing a sleeved bushing.

Furthermore, cylinder 12 does not have protrusions which fit within slots or grooves. Rather, as disclosed in lines 68-78, lugs 14 are formed in the apertures of inner sleeve 2 when the cylinder 12 is compressed between the inner and outer sleeve

causing it to flow into the apertures. For at least these reasons, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 14 and 18.

Claims 15-17 and 19-21 recite features not shown or taught by the prior art, as discussed above in regards to claims 14 and 18. In addition, these claims define features not disclosed or taught by the prior art, are patentably distinct from the prior art and should be allowable. Consequently, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 15-17 and 19-21.

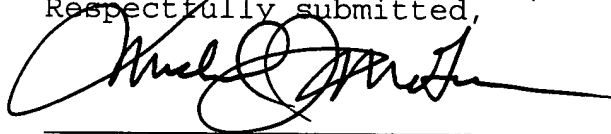
Finally, the subject Office Action cited Herbenar et al. and Powell as disclosing elements of the present invention. However, no rejection was made in addition to not specifying a possible statutory basis for any rejection. It was noted in the subject Office Action that Herbenar et al. discloses a rib or protrusion 42 of bushing 41. Even if this is true, this reference does not disclose the remaining structures defined by claims 1-21. In particular, Herbenar et al. does not disclose a bushing receiving bore separate and distinct from a bushing including a groove, ribbed, slot, or hole portion as recited in the claims.

It was also noted that Powell discloses ribs or protrusions 6 and grooves 5. Applicants submit, however, that Powell does not disclose a bushing receiving bore separate and distinct from a bushing, the bore including a groove portion.

In view of the foregoing, applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C.

112, second paragraph, 35 U.S.C. 102(b) and 35 U.S.C. 103(a).
Additionally, applicants respectfully request a notice of
allowance of the claims of the present application. Early and
favorable action is hereby solicited and appreciated.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael J. McGee", written over a horizontal line.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

[003] Leaf springs are ordinarily connected to the frame rails at their opposing ends by way of a formed eye of the leaf spring that accepts a bushing adapted to permit such connection. The bushing components typically utilize pin type connections in double shear type hangers and shackles. Traditionally, leaf spring bushings include an elastomeric core that is confined by an outer metal sleeve. Such bushings conventionally have three layers, including an inner [inter] metal sleeve (or pin), the elastomeric core and the outer metal sleeve. The bushings are typically installed or assembled into each leaf spring eye located at opposite ends of the leaf spring to permit connection with the frame hangers and/or shackles.

In the claims:

Claim 1 has been amended as follows:

1. (Amended) A suspension component connection assembly, comprising:

[a suspension component having a bushing receiving bore with first and second opposing axial ends, said bushing receiving bore including a groove portion positioned intermediate said first and second axial ends of said suspension component; and

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a ribbed portion positioned intermediate said first and second axial ends of said elastomeric portion, said ribbed portion being adapted to fit within said groove portion of said suspension component.]

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a ribbed portion positioned intermediate said first and second axial ends of said elastomeric portion; and

a suspension component having a bushing receiving bore separate and distinct from said bushing with first and second opposing axial ends, said bushing receiving bore including a groove portion positioned intermediate said first and second axial ends of said suspension component, said ribbed portion of said bushing being adapted to fit within said groove portion of said suspension component.

8. (Amended) A suspension component connection assembly, comprising:

[a suspension component having a bushing receiving bore with first and second opposing axial ends, said bushing receiving bore including a ribbed portion positioned intermediate said first and second axial ends of said suspension component; and

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a grooved portion positioned intermediate said first and second axial ends of said elastomeric portion, said ribbed portion being adapted to fit within said groove portion of said bushing.]

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a grooved portion positioned intermediate said first and second axial ends of said elastomeric portion; and

a suspension component having a bushing receiving bore separate and distinct from said bushing with first and second opposing axial ends, said bushing receiving bore including a

ribbed portion positioned intermediate said first and second axial ends of said suspension component, said ribbed portion of said suspension component being adapted to fit within said groove portion of said bushing.

14. (Amended) A suspension component connection assembly, comprising:

[a suspension component having a bushing receiving bore with first and second opposing axial ends, said bushing receiving bore including a slot portion positioned intermediate said first and second axial ends of said suspension component; and

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a protrusion positioned intermediate said first and second axial ends of said elastomeric portion, said protrusion being adapted to fit within said slot of said suspension component.]

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a protrusion positioned intermediate said first and second axial ends of said elastomeric portion; and

a suspension component having a bushing receiving bore separate and distinct from said bushing with first and second opposing axial ends, said bushing receiving bore including a slot portion positioned intermediate said first and second axial ends of said suspension component, said protrusion of said bushing being adapted to fit within said slot of said suspension component.

18. (Amended) A suspension component connection assembly, comprising:

[a suspension component having a bushing receiving bore with first and second opposing axial ends, said bushing receiving bore including a hole positioned intermediate said first and second axial ends of said suspension component; and a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a protrusion positioned intermediate said first and second axial ends of said elastomeric portion, said protrusion being adapted to fit within said hole of said suspension component.]

a sleeveless bushing having an elastomeric portion with first and second opposing axial ends, said elastomeric portion having a protrusion positioned intermediate said first and second axial ends of said elastomeric portion; and

a suspension component having a bushing receiving bore separate and distinct from said bushing with first and second opposing axial ends, said bushing receiving bore including a hole positioned intermediate said first and second axial ends of said suspension component, said protrusion of said bushing being adapted to fit within said hole of said suspension component.